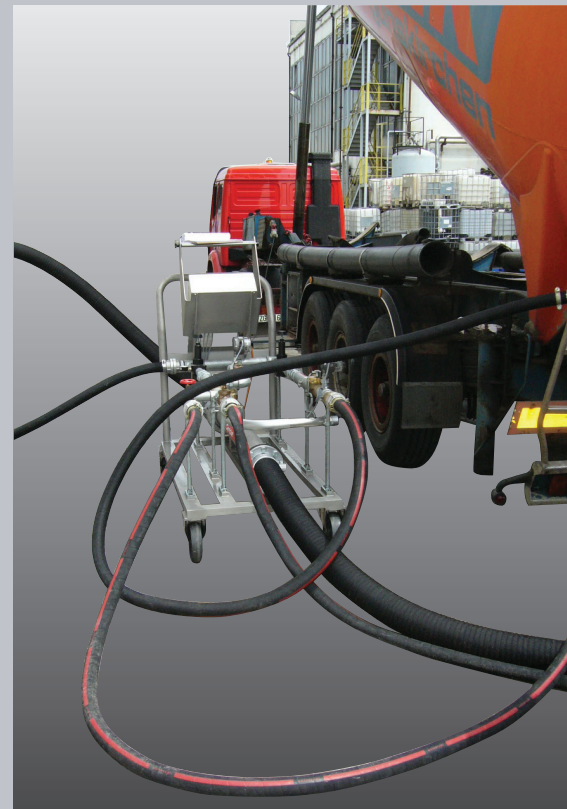


**Case Study No 6**

# GENTLE UNLOADING OF SODIUM PERBORATE FROM BULK VEHICLES BY PNEUMATIC PLUG CONVEYING

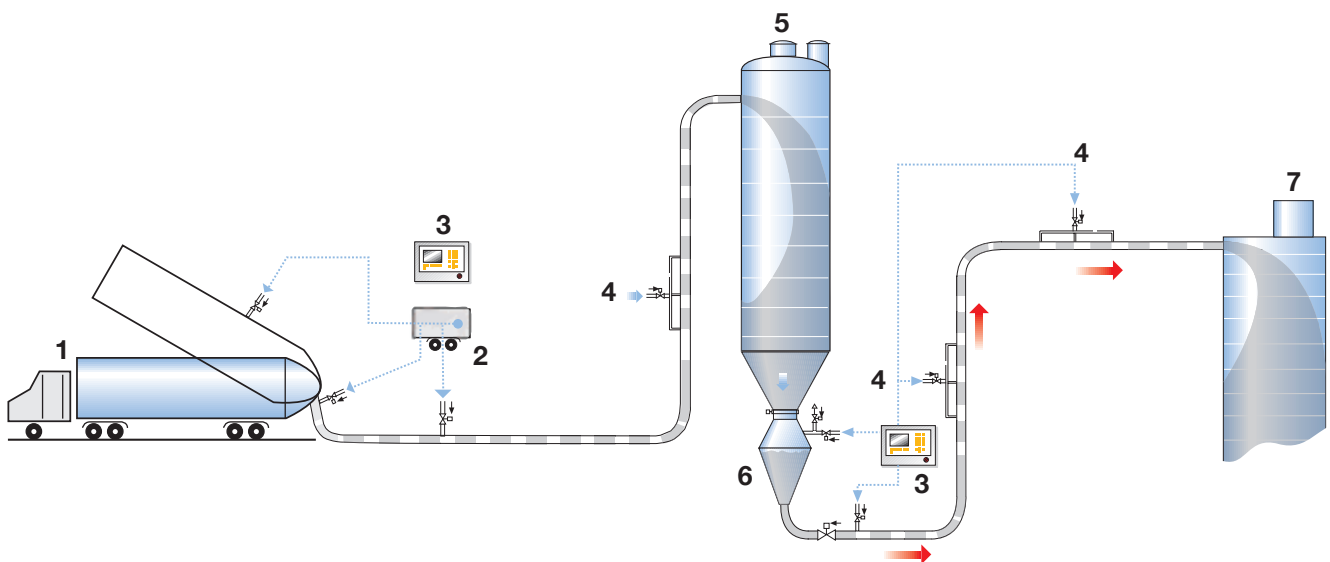
<b>Subject</b>	Unloading bulk vehicles; conveyor system; conveying distance 9 meters horizontal, 12 meters vertical.
<b>Client</b>	Labud d.o.o., Zagreb, Croatia.
<b>Gericke Technology</b>	Gentle unloading of bulk tankers; PTA-PL system (Pulseline®). Mobile docking station with integral control-unit, additional equipment for controlled and pulsed secondary air, injections along the pipe (patented).
<b>Application</b>	Unloading bulk tanker and low-friction conveying of sodium perborate tetrahydrate to the bulk silo.
<b>Material conveyed</b>	Sodium perborate tetrahydrate (washing powder ingredient); bulk density: 0.8 kg/l.
<b>Particle size physical properties</b>	$d_{50}$ approx. 300 $\mu\text{m}$ ; free-flowing, fragile.
<b>Output</b>	8 t/h or 10 m <sup>3</sup> /h.
<b>Product source</b>	Bulk vehicle (30 m <sup>3</sup> ).
<b>Product destination</b>	Storage silo.
<b>System requirements</b>	Dust-free and low-friction conveying. Reliable operation in summer and winter; use of dried and purified compressed air from the existing factory compressed air system. Minimum conveying air volume.





Fine granulated washing powder is delivered in a bulk vehicle and transported pneumatically to a storage silo. The new equipment includes the gentle action PTA-PL mobile bulk unloading system (Pulseline®) which replaced the original bulk unloading high velocity system reducing the proportion of fine particles by approximately 15%!

The product is transported another 60 m from the storage silo to the day bin. It is also transported slowly over this section by pneumatic conveying using a pressure tank and controlled pulsated bypass air.



**Legend**

- 1 Bulk tanker
- 2 Mobile PTA-PL bulk tanker unloading unit
- 3 Controller
- 4 PL activator

- 5 Storage silo
- 6 PTA-PL 160
- 7 Day bin